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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,247

08/12/2005

Abbas Razavi

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EXAMINER

RABAGO, ROBERTO

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,247

Applicant(s)

RAZAVI, ABBAS

Examiner

Roberto Rábago

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-54 is/are pending in the application.
- 4a) Of the above claim(s) 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-51 and 53 is/are rejected.
- 7) ☒ Claim(s) 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/27/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 29-53 in the reply filed on 10/19/2007 is acknowledged.

Specification

2. (a) The specification is objected to because on pages 6, 8 and 13, text appears to be missing from the last line as a result of a photocopying error. Applicants should review the content of pages 3, 4, 5, 7 and 12 because the last line of each page may be missing.

(b) The specification is objected to because there is no Brief Description of the Drawings as required by 37 CFR 1.74. Each panel of the drawings must be referenced in the description.

Drawings

3. The second page of figures is objected to because it is not labeled as required by 37 CFR 1.84 (t) and 1.84(u).

Claim Objections

4. (a) Claim 31 is objected to because the first occurrence of "polyolefin" is misspelled.

(b) Claim 42 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claimed scope is identical with parent claim 41.

(c) Claim 29 is objected to because in "AR"³, the number 3 should be subscripted for consistency with the description of analogous parameters.

(d) Claim 29 is objected to because in the definition "... each R'_n is ...", it would appear that the n should be deleted because "n" is a numerical subscript and not part of the parameter R'.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 29-51 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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(a) Claim 29 (and claims 30-51 as dependent thereon) recites in the preamble a process for producing "a polyolefin having a multimodal molecular weight distribution" and recites two processes for making a first multimodal polyolefin and a second polyolefin. However, the claim includes no required relationship between the two stages or the polymers produced, and since the first component satisfies the requirement of the preamble that the polyolefin be multimodal, the significance of the second component cannot be determined. As drafted, the claimed process requires no connection between the two stages in space or time, and no requirement that the two produced polymer components be in contact with each other, or that they form any sort of blend or composite material. Accordingly, the intended scope is indefinite because, although it would appear that applicants intend for some relationship to exist between the two stages, that intention cannot be determined. For the purposes of applying prior art, the scope will be assumed to include embodiments wherein the two stages are wholly unrelated.

(b) Claim 53 is indefinite because it depends from cancelled claim 1.

7. Claim 36 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification has been reviewed, but no description of the bulky substituent being an additional indenyl group can be found. It

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would appear that the claim should have indicated a benzindenyl group rather than a bis-indenyl group (see original claim 7).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 29-35, 37, 38, 50 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Winter et al. (US 5,700,886).

The reference discloses in Examples 1, 5-11 and 13 the making of bimodal or multimodal polyolefin using a bridged bis-indenyl metallocene within the claimed scope, including all limitations of step claimed (a). The reference further discloses in Examples 2 and 3 the making of polyolefin using a bridged cyclopentadienyl-fluorenyl metallocene within the claimed scope, including all limitations of claimed step (b). Taken together, the two processes include all limitations of claimed steps (a) and (b), because as stated above, neither the two process steps nor the resultant polymers are required to be related in any specific manner. Although the reference has not provided a plot of the MWD for determination of the overlap, the two polymers produced would necessarily have the claimed overlap because the Mw values are similar and Mw/Mn values are broad. For example, Example 1 discloses Mw of 704,000 with Mw/Mn of 15.7, while Example 2 discloses Mw of 764,000 with Mw/Mn of 6.9. The two samples would

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necessarily have the required overlap, as would Example 3 when compared with any of Examples 5-11 and 13.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al. (US 5,700,886).

The parent claim is discussed with respect to this reference above. Missing from the cited examples is the use of an ethylene bridge. However, one of ordinary skill in the art would be motivated to include this feature in embodiments analogous to those of the previously cited examples because patentee has recommended ethylene-bridged bis-indenyl metallocenes for the disclosed methods (see col. 6, lines 34 and 53).

12. Claims 40-49 rejected under 35 U.S.C. 103(a) as being unpatentable over the combined disclosures of Winter et al. (US 5,700,886) and Razavi (US 6,515,086).

Winter discloses in Examples 1, 5-11 and 13 the making of bimodal or multimodal polyolefin using a bridged bis-indenyl metallocene within the claimed scope, including all limitations of step claimed (a). Razavi discloses in Example 1 the making of the making of polyolefin using a bridged cyclopentadienyl-fluorenyl metallocene

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within the claimed scope, including all limitations of claimed step (b) (see also Table 2). Taken together, the two processes include all limitations of claimed steps (a) and (b). Independent claim 29 is drafted such that no specific relationship exists between step (a) and (b), and furthermore no contact is required between the polymers produced in each stage. Accordingly, this rejection is based upon the fact that each separate polymerization stage (a) and (b) are known in the prior art, and the claimed unrelated steps would therefore be obvious over the two reference processes in the absence of any relationship between the two stages. Although neither reference has provided a plot of the MWD for determination of the overlap, the two polymers produced would necessarily have the claimed overlap because the Mw values are similar and the Mw/Mn values are broad. For example, Example 1 of Razavi discloses Mw of 450,834 with Mw/Mn of about 3, while Example 11 of Winter discloses Mw of 403,500 with Mw/Mn of 17.4. The two samples would necessarily have the required overlap, as would most or all of the other combinations.

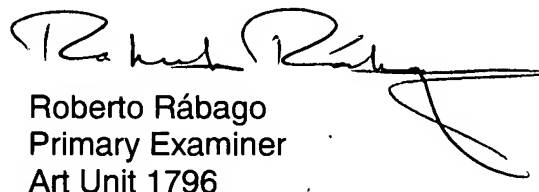
13. Claim 52 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago
Primary Examiner
Art Unit 1796

RR
November 9, 2007